

WHAT IS CLAIMED IS:

- 1 1. A method of coating a medical device comprising:
2 interfacing a therapeutic with a supercritical fluid; and
3 transferring the therapeutic from the supercritical fluid to the medical device.

- 1 2. The method of claim 1 further comprising:
2 applying a carrier coating to the medical device.

- 1 3. The method of claim 1 wherein transferring the therapeutic from the supercritical fluid to
2 the medical device includes spraying the supercritical fluid at the medical device.

- 1 4. The method of claim 1 wherein transferring the therapeutic from the supercritical fluid to
2 the medical device includes exposing the medical device to a bath of supercritical
3 fluid.

- 1 5. The method of claim 1 wherein the therapeutic substantially dissolves in the supercritical
2 fluid upon.

- 1 6. The method of claim 1 wherein the therapeutic is colloidally suspended in the
2 supercritical fluid.

- 1 7. The method of claim 1, further comprising:
2 applying a vacuum force to a chamber containing the medical device.

- 1 8. The method of claim 1 wherein the therapeutic is combined with a carrier coating.

- 1 9. The method of claim 1 further comprising:
2 collecting the supercritical fluid after transferring the therapeutic from the
3 supercritical fluid to the medical device; and
4 removing residual therapeutic from the supercritical fluid after collecting the
5 supercritical fluid.
- 1 10. The method of claim 1 wherein the supercritical fluid is supercritical carbon dioxide and
2 the therapeutic is paclitaxel.
- 1 11. The method of claim 1 wherein the medical device is chosen from a group
2 consisting of a stent, a peripherally inserted central catheter, an angio-catheter, a
3 stent-graft, a vena-cava filter, and an aneurysm coil.
- 1 12. A method of coating a medical device comprising:
2 placing a medical device in a coating chamber;
3 coating the medical device;
4 interfacing a therapeutic with a supercritical fluid; and
5 exposing the coating to the supercritical fluid.
- 1 13. The method of claim 12 wherein exposing the coating to the supercritical fluid includes
2 spraying the supercritical fluid at the medical device.
- 1 14. The method of claim 12 wherein exposing the coating to the supercritical fluid includes
2 flooding the coating chamber with the supercritical fluid after the therapeutic has
3 been interfaced with the supercritical fluid.

- 1 15. The method of claim 12 further comprising:
2 swelling the coating by exposing the coating to a supercritical fluid.
- 1 16. An article of manufacture comprising:
2 a medical device having a releasable therapeutic on one of its surfaces,
3 the medical device manufactured by:
4 placing the medical device in a coating chamber, and
5 exposing the medical device to a supercritical fluid carrying a therapeutic.
- 1 17. The article of manufacture of claim 16 wherein the medical device is chosen from a group
2 consisting of: a stent, a catheter, a vena cava filter, an aneurysm coil, a stent-graft, an a-v
3 shunt, an angio-catheter, and a peripherally inserted central catheter.
- 1 18. The article of manufacture of claim 16 wherein the manufacture of the medical device
2 also comprises coating the medical device with a coating and swelling the coating on the
3 medical device after it is applied to the medical device.
- 1 19. The article of manufacture at claim 16 wherein the supercritical fluid exposed to the
2 medical device contains a coating polymer.
- 1 20. A system of coating a medical device comprising:
2 a supercritical fluid tank;
3 a therapeutic tank; and
4 a coating chamber,
5 the coating chamber in communication with the supercritical fluid tank,
6 the therapeutic tank in communication with the supercritical fluid tank,
7 the supercritical fluid tank containing supercritical fluid.